

**PATENT APPLICATION TRANSMITTAL LETTER**  
(Large Entity)

Docket No.  
S-100,791

TO THE COMMISSIONER FOR PATENTS

Transmitted herewith for filing under 35 U.S.C. 111 and 37 C.F.R. 1.53 is the patent application of:

For: **PIEZOELECTRIC AXIAL FLOW MICROVALVE**

Enclosed are:

- Certificate of Mailing with Express Mail Mailing Label No.
- 9 sheets of drawings.
- A certified copy of a application.
- Declaration       Signed.       Unsigned.
- Power of Attorney
- Information Disclosure Statement
- Preliminary Amendment
- Other:



**31970**  
PATENT TRADEMARK OFFICE

06727 U.S.P.T.O  
10/706477



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**CLAIMS AS FILED**

For	#Filed	#Allowed	#Extra	Rate	Fee
Total Claims	26	- 20 =	6	x \$18.00	\$108.00
Indep. Claims	2	- 3 =	0	x \$78.00	\$0.00
Multiple Dependent Claims (check if applicable)	<input type="checkbox"/>				\$0.00
				<b>BASIC FEE</b>	\$690.00
				<b>TOTAL FILING FEE</b>	\$798.00

- A check in the amount of to cover the filing fee is enclosed.
- The Director is hereby authorized to charge and credit Deposit Account No. as described below.
  - Charge the amount of as filing fee.
  - Credit any overpayment.
  - Charge any additional filing fees required under 37 C.F.R. 1.16 and 1.17.
  - Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b).

Dated: November 7, 2003

Signature

cc:



## D e partment of En ergy

Chicago Operations Office  
9800 South Cass Avenue  
Argonne, Illinois 60439

November 7, 2003

### VIA EXPRESS MAIL

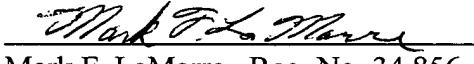
BOX PATENT APPLICATION  
Assistant Commissioner for Patents  
Washington, D.C. 20231

SUBJECT: APPLICATION ENTITLED:  
**“PIEZOELECTRIC AXIAL FLOW MICROVALVE”**  
INVENTORS: RANDALL GEMMEN, JIMMY THORNTON,  
**JEFFREY S. VIPPERMAN and WILLIAM W. CLARK**

U.S. DOE CASE NO.: S-100,791

CERTIFICATE OF MAILING BY EXPRESS MAIL UNDER  
37 C.F.R. § 1.10 - MAILING LABEL EJ584431788US  
DATE OF DEPOSIT NOVEMBER 7, 2003

I hereby certify that this paper or fee and the documents referred to as attached therein are being deposited with the United States Postal Service in an envelope as “EXPRESS MAIL POST OFFICE TO ADDRESSEE” service under 37 C.F.R. § 1.10 on the date indicated above and is addressed to the “Assistant Commissioner for Patents, Washington, D.C. 20231”.

  
Mark F. LaMarre, Reg. No. 34,856  
U. S. Department of Energy  
Attorney for Applicant

Enclosures:  
Patent Application, w/attachment

cc: Paul A. Gottlieb



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S-100,791



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**Piezoelectric Axial Flow Microvalve**

**Inventors:**

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Jimmy Thornton  
Jeffrey S. Viperman  
William W. Clark